Claims:

1. Vision aid in the form of telescopic spectacles with two lens systems, which each comprise at least one objective lens (70) and one eyepiece (71), with an autofocussing means which changes the focal length for sharp focussing of the lens systems according to the distance of the telescopic spectacle from the object, with a means for changing the magnification factor of the lens systems ("zoom") and with a means for matching the parallax between the lens systems of the vision aid to the focal length which has been set according to the distance of the telescopic spectacles from the object, there being adjustable optical elements in the beam path of the vision aid, characterized in that the angle (13) between the beam paths (14) running from the lens systems (1) to the object can be changed using adjustable optical elements (11) which are located in the beam path of the vision aid.

2. Vision aid as claimed in claim 1, wherein the optical elements (11) can be moved transversely to the beam path in the lens systems.

3. Vision aid as claimed in claim 1, wherein the optical elements (11) can be moved along straight paths.

4. Vision aid as claimed in claim 2, wherein the optical elements (11) can be moved along curved paths (12).

5. Vision aid as claimed in one of claims 1 to 4, wherein the optical elements (11) are arranged to be able to tilt.

6. Vision aid as claimed in one of claims 1 to 5, wherein the optical elements (11) are lenses or groups of lenses.

7. Vision aid as claimed in one of claims 1 to 5, wherein the optical elements (11) are prisms or groups of prisms.

8. Vision aid as claimed in one of claims 1 to 7, wherein the lens systems (51, 53) are located in one tube (1) at a time.

9. Vision aid as claimed in one of claims 1 to 7, wherein the lens systems (51, 53) are located in a common tube (50).

10. Vision aid as claimed in claim 9, wherein the lens systems (51, 53) are covered by a cover (53) which is located adjacent to the objective lens (70) and/or a cover (53) which is located adjacent to the eyepiece (71).

11. Vision aid as claimed in one of claims 1 to 10, wherein the optical elements (11) are located within the tube (50) or within the tubes (1).

12. Vision aid as claimed in one of claims 1 to 11, wherein the optical elements (11) are located in front of the plane of the objective lens.

13. Vision aid as claimed in one of claims 1 to 12, wherein information in video and/or text form can be inserted into at least one optical plane (16) which is located in one of the lens systems.

14. Vision aid as claimed in one of claims 1 to 13, wherein there are displays (18) for display of information in video and/or text form next to at least one of the two eyepieces (2).

15. Vision aid as claimed in one of claims 1 to 14, wherein a display means (18), for example a display, is connected to the vision aid and the images acquired by the vision aid can be transferred to the display.

16. Vision aid as claimed in claim 15, wherein the display means (18) is located outside the vision aid.

17. Vision aid as claimed in claim 14 or 15, wherein the images acquired by the vision aid can be transmitted by an optical element, for example, a beam splitter, or by reflecting them out of at least one of the two beam paths of the vision aid onto the display means (18).

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18. Vision aid as claimed in one of claims 1 to 17, wherein the video or text insertions which contain information can be stereoscopically inserted into the two beam paths of the tubes (1).

19. Vision aid as claimed in one of claims 1 to 18, wherein the images or text parts can be inserted as individual images which have been corrected by the eye distance and parallax.

20. Vision aid as claimed in one of claims 1 to 19, wherein inserted information can be selected by changing the viewing angle of the vision aid to the viewed object.

21. Vision aid as claimed in one of claims 1 to 20, wherein measuring instruments and/or sensors such as optical or electromagnetic position determination systems or inertial sensors, such a accelerometers or angular velocity sensors, are assigned to the vision aid.

22. Vision aid as claimed in one of claims 14 to 21, wherein anatomical, functional and technical information such as video data and EKG can be inserted as information faithfully to the position.

23. Vision aid as claimed in one of claims 14 to 22, wherein data about interactive determination of the location of medical devices and/or instruments relative to the patient can be inserted.

24. Vision aid as claimed in one of claims 1 to 23, wherein images which are inserted into the beam path of at least one lens system or into displays (18) mounted next to the eyepieces (2, 71) can be displayed and fixed as entire or partial images.

25. Vision aid as claimed in one of claims 1 to 24, wherein a measurement scale is reflected into the intermediate plane (16) of the objective lens.

26. Vision aid as claimed in claim 25, wherein the measurement scale of the focal length set at the time and the magnification of the objective lens is chosen accordingly.

27. Vision aid as claimed in one of claims 1 to 26, wherein changing the focal length and/or the magnification factor can be controlled by a voice-dependent control.

28. Vision aid as claimed in one of claims 1 to 27, wherein on the vision aid there is a light source with an aperture angle which can be matched to the respective magnification of the vision aid such that the size of the illuminated field corresponds to the visual field of the vision aid.

29. Vision aid as claimed in claim 28, wherein the light source is a light source which is supplied via a fiber optic bundle (20) from an external light source (29).

30. Vision aid as claimed in claim 28 or 29, wherein the aperture angle of the light source and the intensity of the emerging

light can be changed by a lens system which is located in the tubes or on the light source and/or a shutter.

31. Vision aid as claimed in one of claims 1 to 30, wherein light from the light source (19) can be coupled by a beam splitter (21) or the prism surface of a prism reversal system (21) and emerges through the optical system of the vision aid towards the object.

32. Vision aid as claimed in one of claims 1 to 31, wherein the distance of the objective lenses (70) of the lens systems from one another can be changed at a constant distance of the eyepieces (2) from one another.

33. Vision aid as claimed in claim 30, wherein the distance of the objective lenses (70) from one another is provided by a connection (17) with an adjustable length between the tubes (1) which hold the lens systems with a constant connection (17) between the eyepieces (2) of the lens system.

34. Vision aid as claimed in claim 33, wherein the distance of the objective lenses (70) from one another can be changed by parallel adjustment of the tubes (1) and wherein the eyepieces (2) are adjustable diametrically opposite on the tubes (1).

35. Vision aid as claimed in one of claims 1 to 34, wherein the eyepieces (2) are made as interchangeable eyepieces and/or the objective lenses (70) are made as interchangeable objective lenses.

36. Vision aid as claimed in one of claims 1 to 35, wherein in the vision aid there is at least one means for acquiring the location of the pupil of the user, which means is coupled to an autofocussing means and wherein the distance (A) between the vision aid and the object is acquired for actuating the

autofocussing means at the viewing angle dictated by the location of the pupil.

37. Vision aid as claimed in one of claims 1 to 36, wherein there are filters (28) in at least one of the two lens systems.

38. Vision aid as claimed in claim 37, wherein the filters (28) are adjustable into and out of their working position.

39. Vision aid as claimed in one of claims 1 to 38, wherein in at least one lens system a laser beam emerging from the laser means, optionally coupled into the beam path of the lens system, is pointed at the object (30).

40. Vision aid as claimed in claim 39, wherein the coupling of the laser beam in an intermediate image plane is equipped with a hairline so that the diameter and the position of the laser beam in the object field can be displayed.

41. Vision aid as claimed in one of claims 1 to 40, wherein the vision aid is attached to a headset (34).

42. Vision aid as claimed in claim 41, wherein on the headset (34) there is a tension brace (35) with variable length running from the forehead to the back of the head.

43. Vision aid as claimed in claim 41 or 42, wherein on the headset (34) there is at least one, optionally adjustable, counterweight (36) which equalizes the weight of the vision aid in whole or in part.

44. Vision aid as claimed in one of claims 1 to 43, wherein stabilization of the line of sight is assigned to the beam paths through the lens systems.

45. Vision aid as claimed in claim 44, wherein the stabilization of the line of sight is made as active or passive vibration damping.

46. Vision aid as claimed in one of claims 41 to 45, wherein on the headset (34) for the vision aid there are electrodes which acquire the brain currents and wherein the electrodes are coupled to a control with which functions of the vision aid can be controlled.

47. Vision aid as claimed in claim 46, wherein the control is coupled to external devices, for example, robots.

48. Vision aid as claimed in claim 47, wherein coupling takes place via carrier broadcasting or infrared.

49. Vision aid as claimed in one of claims 1 to 48, wherein on the headset (34) there are biosensors, EEG sensors and/or sensors for measuring skin resistance for acquiring the vital signs of a user of the vision aid.

50. Vision aid as claimed in one of claims 1 to 49, wherein on the eyepieces (2) of the vision aid there are holding devices for optical vision devices, for example, eyeglasses.

51. Vision aid as claimed in claim 50, wherein the vision devices which are held by the holding device are located next to the eyepieces.

52. Vision aid as claimed in one of claims 1 to 48, wherein the lens systems of the two beam paths are housed in a common tube.

53. Vision aid as claimed in claim 52, wherein the device (45, 46, 47) is transparent solely to infrared signals (44) which have been reflected by the object field (30).

54. Vision aid as claimed in claim 53, wherein the device is a filter (45).

55. Vision aid as claimed in claim 54, wherein the filter is a polarization filter (45).

56. Vision aid as claimed in claim 52, wherein the device is a tube (47, 65) which is pointed towards the object field (30) and which is located on the receiving part (6) of the autofocussing means (4).

57. Vision aid as claimed in claim 52, wherein the device is a louver attachment (63) or a grating attachment (46) which is located on the receiving part (6) of the autofocussing means (1).

58. Vision aid as claimed in claim 57, wherein the louver attachment (63) or the grating attachment (46) is a louver attachment (63) or a grating attachment (46) pointed in a straight line.

59. Vision aid as claimed in claim 57, wherein the louver attachment or the grating attachment is a louver attachment or a grating attachment which is pointed obliquely.

60. Vision aid as claimed in one of claims 1 to 59, wherein in the beam path of at least one lens system (51, 53) there is a transparent display (74) and wherein virtual displays are reflected into the beam path of the lens system from a main display (75) via a beam guide (80).

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61. Vision aid as claimed in claim 60, wherein the beam guide (80) is a prism, especially a Porro prism, or a semitransparent mirror.